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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/814,189 | 04/01/2004 | Christian Helmut Thoma | 3006-1007-1 | 6418 |

466 7590 10/31/2005

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| EXAMINER | |
|---|---|
| WILSON, GREGORY A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3749 | |

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/814,189 | THOMA, CHRISTIAN HELMUT | |
| | Examiner | Art Unit | |
| | Gregory A. Wilson | 3749 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *01 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-7,9,12,13 and 15-19* is/are rejected.

7)☒ Claim(s) *2,3,8,10,11,14 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities:

On page 5, line 19, change "avaiable" to –available--,

On page 6, line 2, change "adpted" to –adapted--,

On page 6, line 20, change "rototr" to –rotor--,

On page 10, line 25, change "inouning" to –housing--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**Claims 1, 4-6, 9, and 19** are rejected under 35 U.S.C. 102(e) as being anticipated by **Crosta et al (6,595,759). Crosta et al** discloses a fluid heating device (1) comprising a housing having an internal chamber (8) and a fluid inlet (6) and a fluid outlet (7) in fluid communication with said internal chamber, the fluid inlet (6) and the fluid outlet (7) each opening exteriorly of the housing; a rotor (3) disposed centrally in the main chamber and mounted for rotation within the chamber about an axis of rotation, the chamber being dimensioned relative to the axis such that the maximum transverse radial distance is greater than the maximum longitudinal distance (SEE Figure 1); the rotor having a plurality of openings (12) (SEE figure 3A) formed on at least a face thereof confronting fluid entering the chamber, wherein rotation of the rotor would cause the plurality of openings to impart heat-generating cavitation to the fluid entering the chamber; the plurality of openings has concentric circular arrays which are irregular in arrangement (SEE figure 3A).

**Claims 1, 4-7, 9, 12, and 19** are rejected under 35 U.S.C. 102(b) as being anticipated by **Griggs (5,957,122). Griggs** discloses in reference to Figure 3, a fluid heating device (10') comprising a housing having an internal chamber (32), a fluid inlet (63) and a fluid outlet (66) in fluid communication with the internal chamber, the fluid inlet and the fluid outlet each opening exteriorly of the housing; a rotor (12') disposed

centrally in the main chamber and mounted for rotation within the chamber about an axis of rotation, the chamber being dimensioned relative to the axis of rotation such that the maximum transverse radial distance is greater than the maximum longitudinal distance (illustrated in Figure 3); the rotor having a plurality of openings (24) formed on at least a face thereof confronting fluid entering the chamber, wherein rotation of the rotor causes the plurality of openings to impart heat-generating cavitation to a fluid entering the chamber; the plurality of openings comprises plural concentric circular arrays of openings formed on the face and comprise an irregular array of openings (20), the plurality of openings has a plural substantially radially-extending rows of openings formed on the face. A drive shaft (14) is included for imparting mechanical energy to the rotor, the drive shaft supported in the housing by at least two bearings (46), one of at least two bearings being nearer a distal end of the rotor and another of the bearings being nearer the proximate end of the rotor.

**Claims 13, and 15-18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Thoma (6,910,448).**

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

**Thoma** discloses a fluid heating device (in reference to figures 19 & 21-23) comprising a housing having an internal chamber (17i) and a fluid inlet (10i) and a fluid outlet (30i) in fluid communication with the chamber, the fluid inlet (10i) and the fluid outlet (30i) each opening exteriorly of the housing; a rotor (150) mounted for rotation within the chamber about an axis of rotation, the chamber is sized so that the maximum transverse radial distance is greater than the maximum longitudinal distance (as shown in Figure 19), the rotor disposed centrally in the chamber in spaced relation to the housing and dividing the chamber into first and second fluid passage gap regions (clearly displayed in Figures 19, 21 and 22), wherein rotation of the rotor causes fluid entering the inlet to be displaced into at least one of the first and second fluid passage gap regions; the rotor furthermore includes a plurality of openings (155) formed on at least a face thereof to impart heat-generating cavitation to the fluid in at least one of the first and second fluid passage gap regions, the rotor includes a smooth surface and has a fluid inlet radially closer to the axis of rotation than the fluid outlet, a drive shaft (5i) for imparting mechanical energy to the rotor, the drive shaft provided with a fluid passageway (160), the fluid passageway connecting the inlet with at least one of the fluid passage gap regions.

### *Allowable Subject Matter*

**Claims 2, 3, 8, 10, 11, 14, and 20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (571)272-4882. The examiner can normally be reached on 7 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GREGORY WILSON
PRIMARY EXAMINER

Gregory A. Wilson

Gaw
October 26, 2005